

Date: Monday, 1/14/2008 2:32:45 PM  
 User: Kim Johnston

## Process Sheet

Customer : CU-DAR001 Dart Helicopters Services Drawing Name : BRACKET ASSEMBLY  
 Job Number : 36735  
 Estimate Number : 12453  
 P.O. Number :  
 This Issue : 1/14/2008 S.O. No. :  
 Prsht Rev. : NC  
 First Issue : 1 / Type : MACHINED PARTS  
 Previous Run :  
 Written By :  
 Checked & Approved By : 08 0115  
 Comment : Est Rev: Pick: A 04.02.18 New issue KJ/DS

Part Number : D3183041  
 Drawing Number : D3183 REV C1  
 Project Number : N/A  
 Drawing Revision : C1  
 Material :  
 Due Date : 2/5/2008 Qty: 4 Um: Each

## Additional Product

Job Number:



Seq. #: Machine Or Operation: Description:

1.0 M174B2000X01500 17-4 SS Bar



Comment: Qty.: 0.4812 f(s)/Unit Total : 1.9249 f(s)

Material: 17-4 SS Bar per AMS 5604/5643

(M17-4-B1.500x02.000)

Identify for D3183-043

Batch: M19478 DIP 08/02/17 (4) + 1 M19478 SF 08/02/28

not removed from loss 4

2.0 BAND SAW BAND SAW



Comment: BAND SAW

Cut blanks: (1.500" x 2.000") 4.300" long

DIP 08/02/17 (4)

3.0 HAAS1 HAAS CNC VERTICAL MACHINING #1



Comment: HAAS CNC VERTICAL MACHINING #1

1-Machine D3183-1 as per Folio FA320 and Dwg D3183

Identify as D3183-1

2-Deburr

3-Scribe batch number

DIP 08/02/26 / SF 08/02/28 (4)

4.0 QC2 INSPECT PARTS AS THEY COME OFF MACHINE


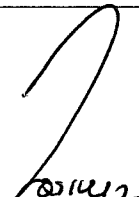
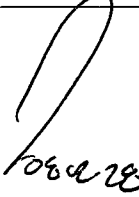


Comment: INSPECT PARTS AS THEY COME OFF MACHINE

SF 08/02/28 (4)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D3183-041 PAR #: N/A Fault Category: Prod / Machined Part NCR: ☒ Yes No DQA: D Date: 08/03/20  
 QA: N/C Closed: H Date: 08/03/24

NCR: <u>36735</u>		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
08/02/27	3.0	H24 offset was not adjusted with tool #4. The center drill has marked the part. L.C.: operator error		Scrap: replace Qty 2 M <u>19478</u>	DJP 08/02/28	S.F. 08/02/28		

NOTE: Date & initial all entries

Date: Monday, 1/14/2008 2:32:45 PM  
User: Kim Johnston

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: BRACKET ASSEMBLY

Job Number: 36735

Part Number: D3183041

Job Number:



Seq. #:

Machine Or Operation:

Description:

5.0

QC8

SECOND CHECK



Comment: SECOND CHECK

5.2 08/02/19

6.0

D312121

Bolt



Comment: Qty.: 2.0000 Each(s)/Unit Total: 8.0000 Each(s)

Pick:

Qty Part Number

Description Batch

2 D3121-21

Bolt

B37478

x8

ml

7.0

D3183045

Bearing Assembly



Comment: Qty.: 2.0000 Each(s)/Unit Total: 8.0000 Each(s)

Pick:

Qty Part Number

Description Batch

2 D3183-045 Bearing Ass

B36638

x2

B38104

ml

8.0

SMALL FAB 1

SMALL & MEDIUM FAB RESOURCE 1



Comment: SMALL & MEDIUM FAB RESOURCE 1

Assemble D3183-041 as per Dwg D3183.

+ scribe.

08/03/19 (4)

9.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

08/03/19 (4x)

10.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location:

233A

8/3/19 SC

(4x)

11.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

08/03/20

Job Completion



mi 2008/3/20

(4)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order:	36735
Description: Bracket		Part Number:	D3183-1
Inspection Dwg: D3183 Rev: C1		Page 1 of 1	

### FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
0.400	+/-0.010	.402	✓			
0.182	+/-0.010	.179	✓			
0.070	+/-0.010	.071	✓			
0.100	+/-0.010	.110	✓			
R0.063	+/-0.010	.063	✓			
R0.189	+/-0.010	.189	✓			
3.881	+/-0.010	3.879	✓			
4.17	+/-0.030	4.179	✓			
0.830	+/-0.010	.830	✓			
0.500	+/-0.010	.501	✓			
0.218	+/-0.010	.215	✓			
1.030	+/-0.010	1.032	✓			
1.90	+/-0.030	1.895	✓			
1.012	+/-0.010	1.008	✓			
0.786	+/-0.010	.789	✓			
R0.19	+/-0.010	.190	✓			
Ø0.392	+0.002/-0.000	.393	✓			
0.162	+/-0.010	.164	✓			
2.799	+/-0.010	2.800	✓			
2.075	+/-0.010	2.075	✓			
0.162	+/-0.010	.164	✓			
0.032	+/-0.010	.030	✓			
0.381	+/-0.010	.390	✓			
0.200	+/-0.010	.195	✓			

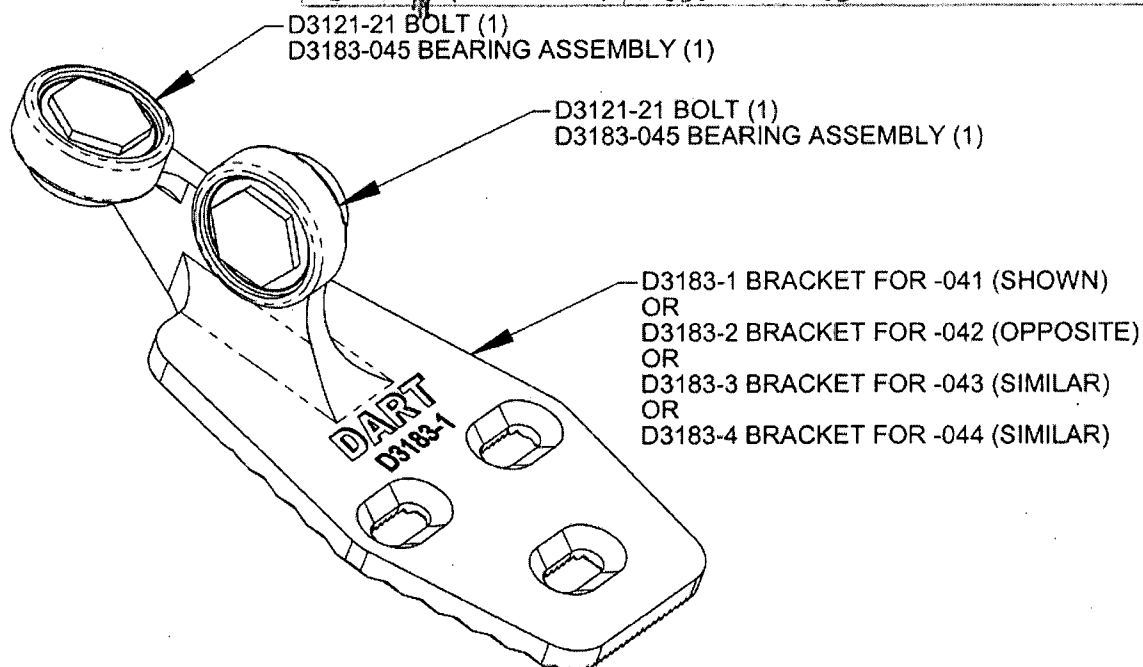
Measured by: <i>SA</i>	Audited by: <i>J.L</i>	Prototype Approval:	N/A
Date: <i>08/02/28</i>	Date: <i>08/02/29</i>	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	05.02.17	New Issue (P/O D3183-041/-042)	KJ/JLM <i>SA</i>	<i>SA</i>

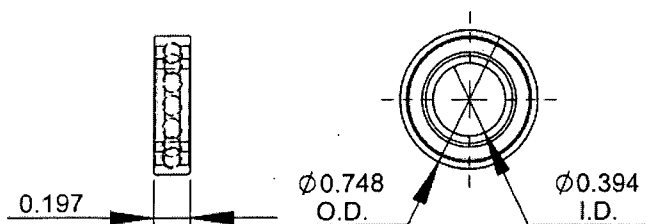


DESIGN #	DRAWN BY UP	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
CHECKED #	APPROVED #	DRAWING NO. <b>D3183</b>	REV. C SHEET 1 OF 4
DATE <b>04.02.17</b>		TITLE <b>BRACKET ASSEMBLY</b>	SCALE 1:1
A	03.01.24	NEW ISSUE	
B	03.06.17	REMOVE BEARING; 1.012 WS 0.882	
C	04.02.17	ADD -045/-9; 0.182 WAS 0.431	
CI	04.11.09	0.830 WAS 0.850	

RELEASED  
04.03.01



**D3183-041 BRACKET ASSEMBLY (SHOWN)**  
**D3183-042 BRACKET ASSEMBLY (OPPOSITE)**  
**D3183-043 BRACKET ASSEMBLY (SIMILAR)**  
**D3183-044 BRACKET ASSEMBLY (SIMILAR)**



**D3183-5 BEARING:**  
**SPECIFICATION CONTROL DRAWING**

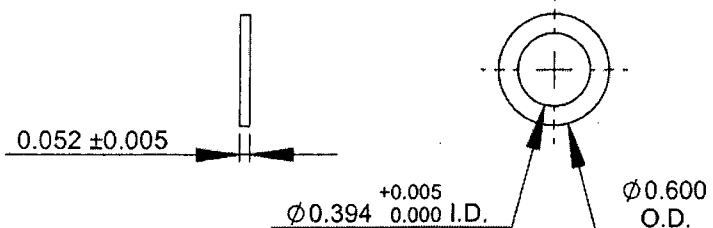
- 1) SINGLE ROW, DEEP GROOVE, CONRAD TYPE, SHIELDED
- 2) POSSIBLE SUPPLIER: NSK P/N 6800ZZ
- 3) ALL DIMENSIONS ARE IN INCHES

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WORK ORDER  
NO. 36735

**D3183-7 WASHER**

- 1) MATERIAL: AISI 303 ROUND BAR (M303R)  
ANNEALED
- 2) BREAK ALL SHARP EDGES 0.005 TO 0.010
- 3) TOLERANCES ARE PER DART QSI 018  
UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES



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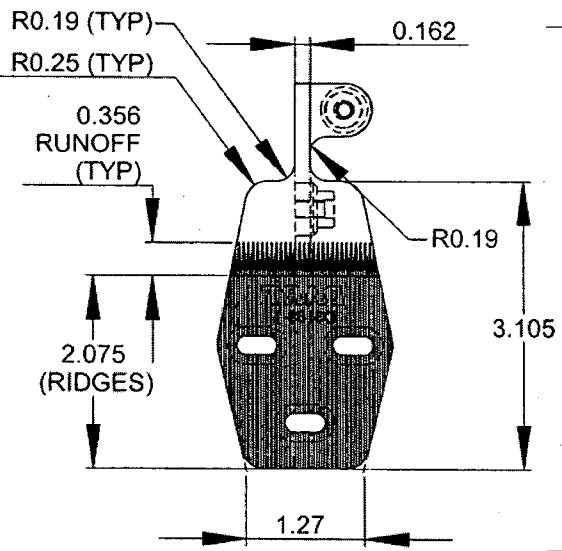
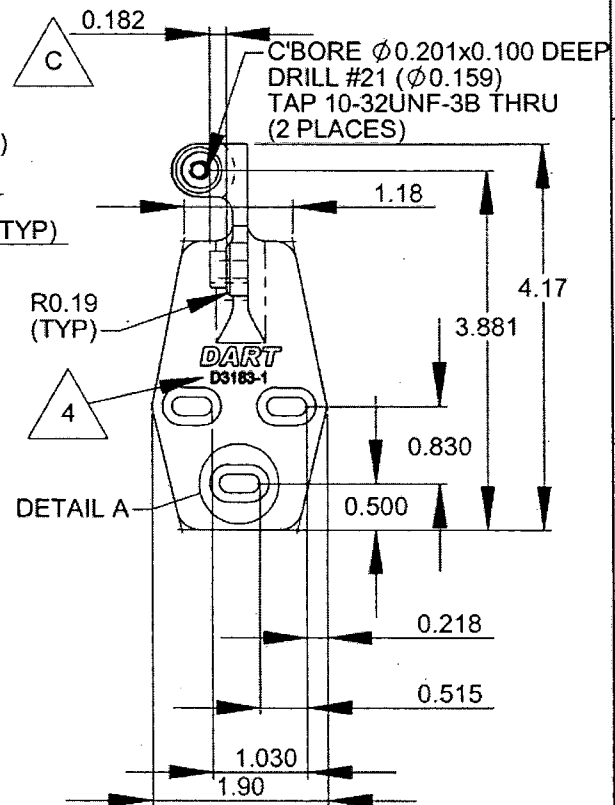
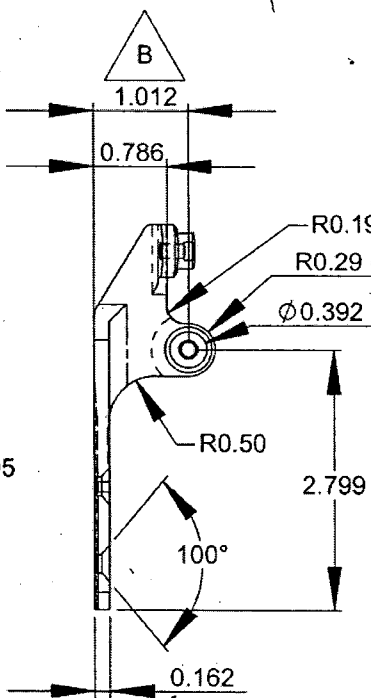
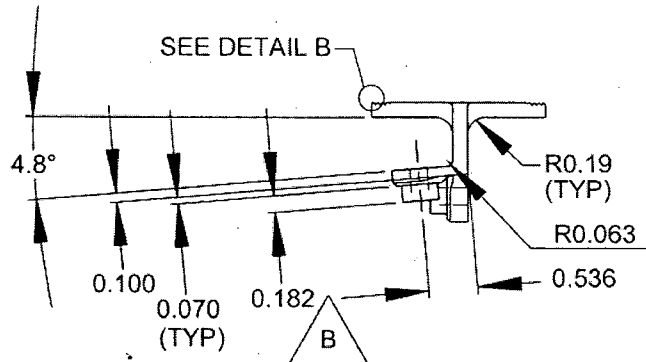
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**DART**

QA ISSUED  
04-03-01

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DATE 04.02.17	DRAWING NO. D3183	REV. C
	TITLE BRACKET ASSEMBLY	SHEET 2 OF 4
		SCALE 1:2

RELEASED  
04-03-01



**D3183-1 BRACKET SHOWN  
D3183-2 BRACKET OPPOSITE**

- 1) D3183-1 CAN BE MADE FROM D3183-3  
D3183-2 CAN BE MADE FROM D3183-4
- 2) MATERIAL: 17-4 SS PER AMS 5604/5643  
(REF DART SPEC. M17-4-B)  
MIN ULTIMATE STRENGTH = 150 ksi  
MIN YIELD STRENGTH = 100 ksi
- 3) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 4) ENGRAVE DART P/N & LOGO AS SHOWN
- 5) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 6) ALL DIMENSIONS ARE IN INCHES

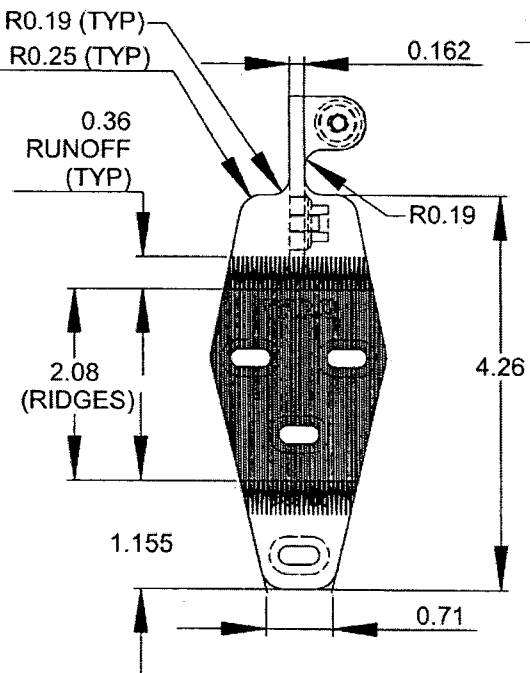
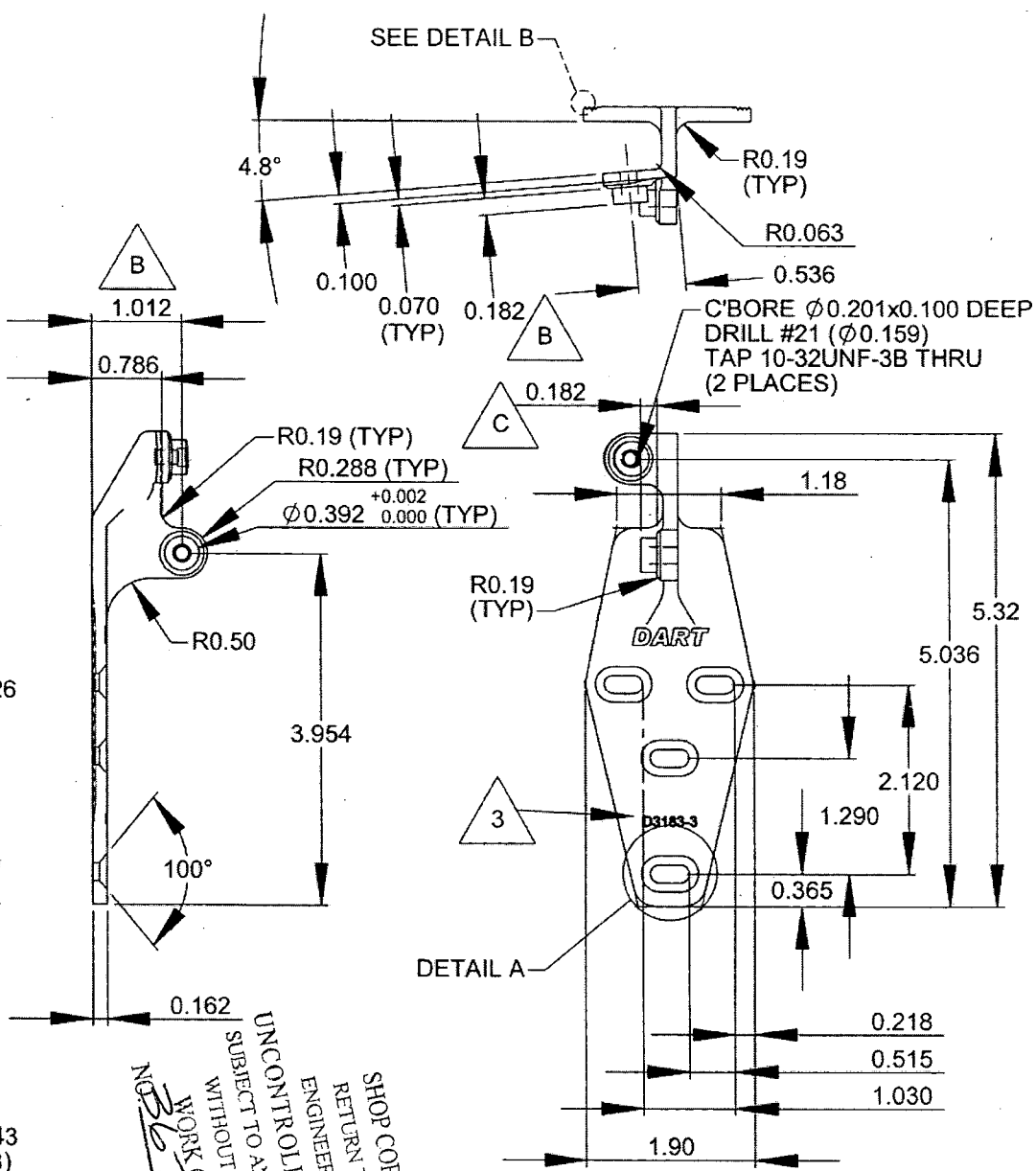
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		D3183	SHEET 3 OF 4
DATE		TITLE	SCALE
04.02.17		BRACKET ASSEMBLY	1:2



D3183-3 BRACKET SHOWN  
(REPLACES BELL P/N 412-030-304-105)  
D3183-4 BRACKET OPPOSITE  
(REPLACES BELL P/N 412-030-304-106)

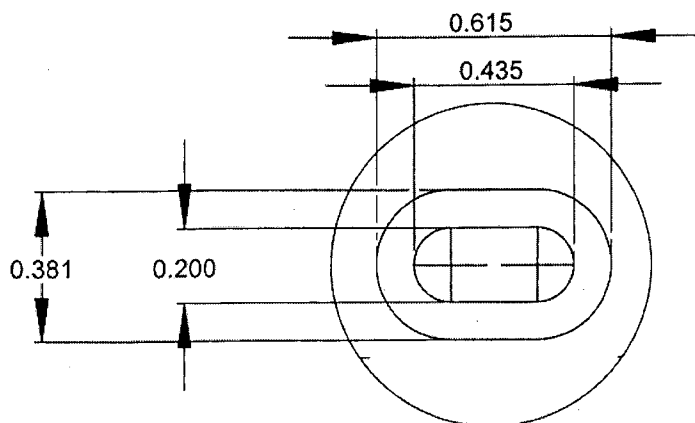
- 1) MATERIAL: 17-4 SS PER AMS 5604/5643  
(REF DART SPEC. M17-4-B)  
MIN ULTIMATE STRENGTH = 150 ksi  
MIN YIELD STRENGTH = 100 ksi
- 2) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 3) ENGRAVE DART P/N & LOGO AS SHOWN
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) ALL DIMENSIONS ARE IN INCHES

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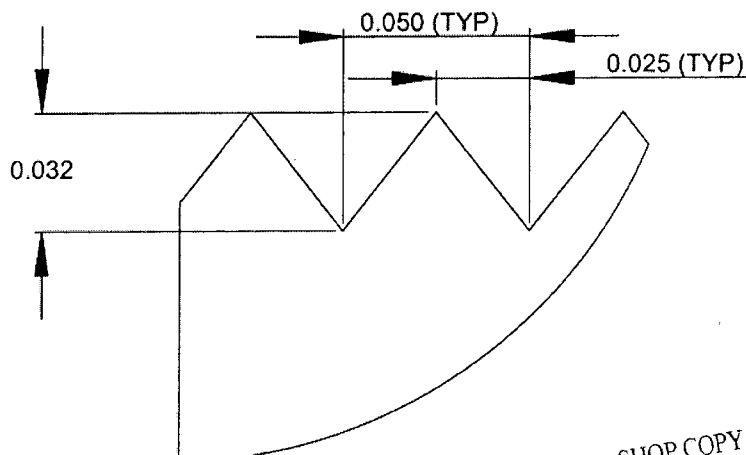


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DATE <b>04.02.17</b>		TITLE <b>BRACKET ASSEMBLY</b>	SCALE 1:1

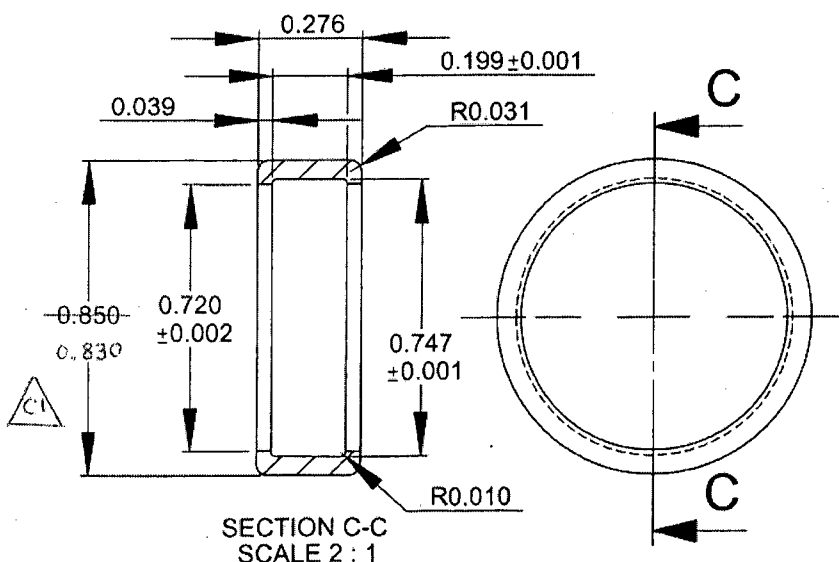


DETAIL A (2 : 1)

**RELEASED**  
04.03.01



DETAIL B (20 : 1)



**D3183-9 CAP**

- 1) MATERIAL: DELRIN ROD, Ø1.00  
(REF DART SPEC. M-DELRIN-R1.00)
- 2) TOLERANCES ARE PER DART QSI 018  
UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES

**D3183-045 BEARING ASSEMBLY**

- 1) ASSEMBLE D3183-5 BEARING AND  
D3183-9 CAP

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